

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)
(PCT Rules 44bis.3(c) and 72.2)

To:

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Eikoh Patent Office
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Minato-ku, Tokyo 1050003
JAPON



Date of mailing (day/month/year) 07 December 2006 (07.12.2006)	
Applicant's or agent's file reference P05225800	IMPORTANT NOTIFICATION
International application No. PCT/JP2005/003874	International filing date (day/month/year) 07 March 2005 (07.03.2005)
Applicant NITTO DENKO CORPORATION et al	

1. Transmittal of the translation to the applicant.



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Masashi Honda
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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference P05225800	FOR FURTHER ACTION		See item 4 below
International application No. PCT/JP2005/003874	International filing date (<i>day/month/year</i>) 07 March 2005 (07.03.2005)	Priority date (<i>day/month/year</i>) 08 March 2004 (08.03.2004)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant NITTO DENKO CORPORATION			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Date of issuance of this report 29 November 2006 (29.11.2006)
Facsimile No. +41 22 338 82 70	Authorized officer <div style="text-align: center; font-weight: bold;">Masashi Honda</div> e-mail: pt08@wipo.int

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

TRANSLATION
PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference
P05225800

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2005/003874

International filing date (day/month/year)

07.03.2005

Priority date (day/month/year)

08.03.2004

International Patent Classification (IPC) or both national classification and IPC

Applicant

NITTO DENKO CORPORATION

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/003874

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐

This opinion has been established on the basis of a translation from the original language into the following language

_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐

a sequence listing

☐

table(s) related to the sequence listing

b. format of material

☐

in written format

☐

in computer readable form

c. time of filing/furnishing

☐

contained in the international application as filed.

☐

filed together with the international application in computer readable form.

☐

furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/003874

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-6	YES
	Claims	NO
Inventive step (IS)	Claims	YES
	Claims 1-6	NO
Industrial applicability (IA)	Claims 1-6	YES
	Claims	NO

2. Citations and explanations:

Document 1: JP, 4-78478, A (Fujitsu Ltd.), 12 March, 1992 (12.03.92), page 3, upper left column, line 9-lower right column, line 12, Fig. 1

Document 2: JP, 2003-21897, A (Nitto Denko Corp.), 24 January, 2003 (24.01.03), paragraphs [0030]-[0040], Fig. 1

Document 3: JP, 5-121307, A (Casio Computer Co., Ltd.), 18 May, 1993 (18.05.93), paragraphs [0010]-[0012], Fig. 4

Document 4: JP, 2002-320902, A (Tokyo Electron Ltd.), 5 November, 2002 (05.11.02), Paragraphs [0016]-[0040], Figs. 1-7, & US, 2002-0150679, A1

Claim 1

The subject matter of claim 1 does not appear to involve an inventive step in view of documents 1-3 cited in the ISR.

Document 1 describes a method for cleaning a semiconductor device using polyimide films.

Document 2 describes a technique of applying polyamic acid to a wafer and drying, followed by hardening with heat to form a polyimide resin layer

Document 3 describes a technique, when forming a film on a wafer, of removing a marked part of the film and exposing the surface of the wafer.

Therefore, a person skilled in the art could have easily conceived of the subject matter of claim 1 based on the techniques described in documents 1-3.

Claim 2

The subject matter of claim 2 does not appear to involve an inventive step in view of documents 1-3 cited in the ISR.

In addition to the reasons described with regard to claim 1, document 3 describes a technique of removing the film of a prescribed width part from a wafer outer circumference edge plane toward the center.

Claim 3

The subject matter of claim 3 does not appear to involve an inventive step in view of documents 1-3 cited in the ISR.

In addition to the reasons described with regard to claim 1, document 3 describes a technique of applying varnish by rotating, followed by removing a part of the varnish on the wafer. Furthermore, document 2 describes that the cure temperature of the varnish is 350-500 °C.

Claim 4

The subject matter of claim 4 does not appear to involve an inventive step in view of documents 1-3 cited in the ISR.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/003874

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

In addition to the reasons described with regard to claim 1, document 1 describes a constitution in which foreign material generated in the semiconductor device is removed.

Claim 5

The subject matter of claim 5 does not appear to involve an inventive step in view of documents 1-4 cited in the ISR.

Document 1 describes a method for cleaning a semiconductor device using polyimide films.

Document 2 describes a technique of applying polyamic acid to a wafer and drying, followed by hardening by heat at the cure temperature of 350-500 °C to form a polyimide resin layer.

Document 3 describes a technique, when forming a film on a wafer, of removing a marked part of the film and exposing the surface of the wafer.

Document 4 describes an application film of a wafer-forming method for discharging varnish from a nozzle while rotating the wafer and moving the nozzle horizontally, to apply varnish spirally on the wafer.

A person skilled in the art could have conceived of providing a part to which varnish is not being applied, instead of removing the application film.

Therefore, a person skilled in the art could have easily conceived of the subject matter of claim 5 based on the techniques described in document 1-4.

Claim 6

The subject matter of claim 6 does not appear to involve an inventive step in view of documents 1-4 cited in the ISR.

In addition to the reasons described with regard to claim 5, document 3 describes a technique of exposing the surface of the wafer as the marked part to a prescribed width from the wafer outer circumference edge plane toward the center, and document 4 describes an application technique in which the shape of the outer circumference edge can be nearly circular.